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Identification of LRF1 and LRF2 Mutants in Arabidopsis

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Poster Presentation 29

IDENTIFICATION OF LRF1 AND LRF2 MUTANTS IN ARABIDOPSIS

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Arabidopsis is a model system for research in plant genetics. It is a typical dicot with a relatively short life cycle and has a small, compact genome with little noncoding DNA. Because these characteristics make it so appealing for research, much of its genome has been mapped, resulting in a database of known genes with unknown functions. The purpose of this experiment is to determine a function for two of these genes, LRF1 and LRF2. These genes are suspected to code for F-box proteins, which are believed to provide specificity in marking proteins for degradation through the ubiquitin pathway. This function often acts as a control mechanism in hormone signaling pathways, and sequence similarity to known genes suggests this is a likely mode of action for LRF1 and LRF2. This experiment employs reverse genetic techniques to identify plants which have had these genes mutated, causing production of a nonfunctional protein.